§ 148-1 AUTHORITY.

This Solar Energy Ordinance is enacted in accordance with RSA 674:17(I)(j) and the purposes of RSA 672:1-III, as amended. The purpose of this ordinance is to accommodate Solar Energy Systems and Distributed Generation Resources in appropriate locations, while protecting the public's health, safety, and welfare.

§ 148-2 PURPOSE.

The Town of Fitzwilliam allows Solar Energy Systems to assist its residents with economic and environmental sustainability while also maintaining Fitzwilliam's scenic vistas and rural character. This ordinance intends to minimize the potential adverse impacts of Solar Energy Systems in the community by ensuring that such facilities are properly screened; properly sited within existing topographic features of the property; and properly insured for consistent maintenance and safety procedures to protect public health.

The Town of Fitzwilliam intends to facilitate the State and National goals of developing clean, safe, and renewable energy resources in accordance with the enumerated policies of RSA 374-G and 362-F that include national security and environmental sustainability.

§ 148-3 APPLICABILITY.

This ordinance shall apply to systems intended for the provision of thermal, chemical, electrical, or mechanical power needs of: the owner and/or operator of the system and/or property situated with the Solar Energy System(s), the community that the energy generation system is located within, or for the provision of selling the power as a utility. The boundaries of the Solar Ordinance shall apply to all zoning districts defined by the Fitzwilliam Zoning Board of Adjustment, with the exception of provisions to the Historic District.

Any Solar Energy System(s) installation not meeting the requirements or contents of this ordinance may submit a variance plan to the Fitzwilliam Zoning Board of Adjustment for consideration.

§ 148-4 DEFINITIONS.

ABUTTER – The current owner of record of any property which is located in New Hampshire and adjoins or is directly across the street or stream from the land under consideration by the Planning Board. For purpose of receiving testimony only, and not for purposes of notification, the term "abutter" shall include any person who is able to demonstrate that their land will be directly affected by the proposal under consideration.

APPLICANT – The owner, or his agent, of any land who is proposing a Ground-Mounted or Roof-Mounted Solar Energy System.

COMMUNITY-SCALE SOLAR ENERGY SYSTEM – Refers to Town-owned, or a community member-owned Solar Energy System where power is produced to offset community power needs and generates up to 1 megawatt of power. The intent is not for a utility system where the purpose is to sell power for profit but to benefit the Town and its residents.

CUSTOMER GENERATOR – A system that uses alternating current electricity that is generated from a renewable energy system located on an individual's, business', or local government's real property. A system located on a leasehold interest does not qualify under this definition.

LARGE-SCALE SOLAR ENERGY SYSTEM – Refers to Community- or Utility-Scale Solar Energy Systems.

SMALL-SCALE SOLAR ENERGY SYSTEM – Refers to residential- and business-scale Solar Energy Systems that generate up to 25 kilowatts of power.

SOLAR ACCESS – The access of a Solar Energy System to direct sunlight.

SOLAR ARRAYS – A group of solar panels connected together.

SOLAR COLLECTOR – A device, structure, or a part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, mechanical, chemical, or electric energy.

SOLAR ENERGY – Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

SOLAR ENERGY SYSTEM – An arrangement of solar collectors and other electrical and/or mechanical devices, located on the property of a Customer Generator, and whose primary purpose is to transform solar energy into electricity or another form of energy, using thermal, mechanical, electrical, or chemical means.

SOLAR ENERGY SYSTEM, GROUND-MOUNTED – A Solar Energy System that is structurally mounted to the ground and is not roof-mounted.

SOLAR ENERGY SYSTEM, ROOF-MOUNTED – A Solar Energy System that is structurally mounted to the roof of a building or structure.

SOLAR PHOTOVOLTAIC (PV) SYSTEM – A solar collection system consisting of one or more building systems; solar photovoltaic cells, panels, or arrays; and solar related equipment that rely upon solar radiation as an energy source for collection, inversion, storage, and distribution of solar energy for electricity generation.

SOLAR THERMAL SYSTEM – A Solar Energy System that uses collectors to convert the sun's rays into useful forms of energy for water heating, space heating, or space cooling.

UTILITY-SCALE SOLAR ENERGY SYSTEMS – Refers to large arrays or farms whose purpose is to generate power to sell to the open market and generate over 1 megawatt of power. These facilities would be subject to the requirements of the New Hampshire Public Utilities Commission.

WETLANDS – An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. *Please be aware that this is an incomplete definition and applicants shall refer to §127 Section 16.1 of the Code of the Town of Fitzwilliam for further information.*

§ 148-5 PERMITS REQUIRED.

A. Construction Permit:

All Solar Energy Systems, regardless of size/scale or mount, are required to submit a Construction Permit to the Board of Selectman.

B. Conditional Use Permit:

All Community-Scale and Utility-Scale Roof- and Ground-Mounted Solar Energy Systems are required to apply for a Conditional Use Permit to the Planning Board. A Conditional Use Permit is not required for Small-Scale Solar Energy Systems.

C. Historic District Permit:

All Solar Energy Systems, regardless of size/scale or mount, located within the Historic District as required to apply to the Historic District Commission. Any Community-Scale and Utility-Scale Solar Energy System must additionally obtain a Conditional Use Permit with the Planning Board.

§ 148-6 GENERAL REQUIREMENTS.

The Planning Board may impose any reasonable conditions or restrictions deemed necessary to carry out the intended purpose of this ordinance.

A. Density / Footprint:

Solar Energy Systems shall not exceed a footprint greater than 15% of the land area of lots 3 acres or less and no more than 20% of a lot greater than 3 acres. The footprint of the Solar Energy System shall include all above ground components and solar access ways and shall be calculated by including the entire area within a single, continuous perimeter enclosing all elements of the Solar Energy System.

B. Height:

The maximum height of any Ground-Mounted Solar Energy System shall not exceed 20 feet off the ground. Roof-Mounted Solar Energy Systems shall be considered exempt for height requirements.

C. Setbacks:

All Ground-Mounted Solar Energy Systems shall adhere to required front, side, and rear yard requirements, along with all required wetland setbacks, and shall not be considered accessory structures when determining required setback provisions. Solar Energy Systems intended to be constructed within a wetland setback area shall be subject to further review in accordance with §127 Section 16.1 of the Code of the Town of Fitzwilliam of the applicability for development on the property.

D. Construction Standards:

All Solar Energy Systems shall conform to applicable building, electrical, and fire codes.

E. Rural Character:

Based upon specific characteristics of the neighborhood, greater setbacks may be required by the Planning Board in accordance with the Preservation of Rural Character regulations under §137 of the Code of the Town of Fitzwilliam.

F. IRC Code:

It is strongly encouraged that Roof-Mounted Solar Energy Systems provide a setback, as defined in the 2012 International Fire Code (IFC) or any code adopted thereafter, to ensure that firefighters may access the roof in a quick and safe manner and may penetrate the roof to create ventilation if necessary.

G. Screening / Buffers:

The use shall provide adequate screening to ensure adjacent property values are not adversely impacted, including but not limited to glare from the solar panels. Screening may be provided by maintaining existing vegetation or through the installation of site-specific evergreen landscaping, suitable fencing, or a combination thereof. Such screening shall be maintained during the operative lifetime of the Solar Energy System Conditional Use Permit.

A detailed screening plan, if determined necessary by the Planning Board or Historic District Commission, may be required to address specific neighborhood sensitivities, mitigate visual impacts, and maintain the rural character of the neighborhood.

H. Stormwater and Run-off:

Must include measures for maintaining storm water controls.

I. Noise:

In accordance with the Noise regulations under §130 of the Code of the Town of Fitzwilliam, Commercial- and Utility-Scale Solar Energy Systems shall regulate noise emittance.

§ 148-7 SAFETY REQUIREMENTS.

Regardless of the size or type of Solar Energy System, applicants are required to properly label safety hazards and directions for operation on their solar equipment. Solar Energy Systems may be subject to provide the following labeling requirements at the discretion of the Town of Fitzwilliam:

A. Disconnect or shutoff switch is clearly labeled as such.

B. AC Combiner Label; used to clarify if there is interconnection, or dual power supply.

C. Inverter and/or electrical box is clearly labeled of where the Solar Energy System rapid shutdown switch is located.

D. DC Raceway Label; warning label placed on raceways on exterior or interior of building, connecting the Solar Energy System to the inverter and transformer.

E. Service disconnect directory label; small sign that uses an image to identify the exact location of disconnect.

F. Lettering should be a minimum of ¾" inches and in capital letters.

G. Font color should be either red or white, and use a reflective coating.

§ 148-8 CONDITIONAL USE PERMIT REVIEW PROCEDURE.

During the Conditional Use Permit Review process, the Planning Board shall consider the impacts of development on abutting properties with Solar Energy Systems. The intent is not to impede someone's right to build, but to reflect upon the Energy Conservation Section of the Fitzwilliam Master Plan where future placement and alignment of buildings and vegetation support solar and other forms of renewable energy.

Proposed Solar Energy Systems for Community- or Utility-Scale shall meet the standards listed above in Section 6 and 7, and, in accordance with RSA 675:6, shall meet the standards for large-scale energy generation facilities set forth by the Fitzwilliam Planning Board for Community- and Utility-Scale Systems as follows:

A. Compatibility:

The Planning Board shall determine if the facility is compatible within its setting by looking at setbacks, buffers, height, stormwater runoff, scale, and density to mitigate impacts to the environment and scenery. The Site Plan Review standards shall also apply when applicable.

B. Public health and safety:

The use will not materially endanger the public health or safety.

C. Site Plan:

Sites planned for, or intended to be used for a Community- or Utility-Scale Solar Energy System, shall submit plans showing the location, size, roads, utility lines, drainage, fencing, lighting, screening, utility corridors, setbacks, density, and landscaping. The development in its proposed location will comply with all requirements of the Fitzwilliam Site Plan Regulations under §219 of the Code of the Town of Fitzwilliam, as well as specific conditions established by the Planning Board.

D. Maintenance plan (includes ground maintenance):

The project proponent shall submit a plan for the operation and maintenance of the Community- or Utility-Scale Solar Energy generation facility, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.

The solar system applicant must provide a ground maintenance plan for the system. Impermeable ground covering between and around the Solar Energy System panels is not permitted. No herbicides or pesticides shall be used on the grounds during the life of the installation to control plant growth.

E. Landscape Plan:

All Community- and Utility-Scale solar energy generation facilities shall provide a landscape plan indicating all proposed changes to the landscape of the site, including temporary or permanent roads or driveways, grading, existing vegetation, clearing and planting, exterior lighting, proposed screening vegetation, or other structures.

F. Burial Plan:

Utility controls and on-site line connections shall be wireless or buried, except at the point of connection with distribution lines, and designed and located so as to minimize disruption to wildlife habitat, agricultural lands, and scenic areas.

G. Utility notification:

No large-scale Ground-Mounted solar power installation shall be constructed until evidence has been given to the Planning Board that the utility company that operates the electrical grid where the installation is to be located has been informed of the solar power installation owner and/or operator’s intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

H. Appurtenant Structures:

All appurtenant structures to large-scale Ground-Mounted solar energy installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking, and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations shall be architecturally compatible with each other and aesthetically unobtrusive. Whenever reasonable, structures should be screened from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

I. Emergency Services:

The large-scale Solar Energy System owner and/or operator shall provide a copy of the project summary, electrical schematic, and Site Plan to the local Fire Chief. The owner and/or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the Solar

Energy System shall be clearly marked as outlined in Chapter 148-7. The owner and/or operator shall identify a responsible person for public inquiries throughout the life of the installation.

J. Decommission plan:

Any Ground-Mounted Solar Energy System which has been abandoned or is no longer operational shall be removed. The owner and/or operator shall physically remove the installation no more than 365 days after the date of discontinued operations and plans for the removal.

A Commitment of Deconstruction shall be included in the plan for when the system is no longer in use. The Planning Board reserves the right to require a posting of a bond for the removal of an unused facility. The Planning Board has the authority to ask for more information and seek outside expertise if, in the opinion of the Planning Board, it is necessary.

§ 148-9 HISTORIC DISTRICT REVIEW PROCEDURE.

Any applicant with a property in the Historic District shall adhere to the standards cited in 148-6 and 148-7, and must apply for their permit through the Historic District Commission. Any large-scale Solar Energy System must additionally obtain a Conditional Use Permit with the Planning Board. At the discretion of the Historic District Commission, applicants may be required to provide the following additional information in order to ensure the historic integrity of the home and/or property is not compromised:

A. Ground-Mounted Solar Energy Systems:

Historic features such as stone walls are protected during the building process.

B. Solar Tiles:

The use of solar tiles in the Historic District is permitted, however applicants are strongly encouraged to take into consideration the visibility, age, and current state of the structure. Installing solar tiles on older homes may be more invasive and damaging to the overall historic integrity of the structure.

C. Solar Batteries:

Applicants looking to install solar batteries may be subject to provide additional screening measures based on the proposed location of the solar battery.

§ 148-10 EXPIRATION.

A permit issued pursuant to this ordinance shall expire if:

A. The solar energy facility is not installed and functioning within 48 months from the date the permit is issued; or,

B. The solar energy facility is abandoned.

§ 148-11 REMOVAL.

Any Ground-Mounted Solar Energy System, regardless of size, which has been abandoned or is no longer operational shall be removed. The owner and/or operator shall physically remove the installation to outside of town border no more than 365 days after the date of discontinued operations and plans for the removal.

§ 148-12 FINANCIAL SURETY.

The permit-granting authority may require the applicant for a large-scale solar facility to provide a form a surety, either through escrow account, bond, or otherwise, to cover the cost of removal in the event the Town must remove the facility. The amount and form, as determined by the permit-granting authority, is to be reasonable and shall not exceed more than 125% of the cost of removal. Such surety will not be required for municipally or state-owned facilities. The applicant shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The amount shall include a mechanism for Cost of Living Adjustment. Should the Owner during the life of the use sell or transfer ownership of the property to another party, all Solar Conditions herein described shall transfer to the new owner and shall be binding upon the new owner.

PRINCIPAL AND ACCESSORY USE							
Size (Scale)	**Mount**	*Residential Districts*		*Business Districts*		*Industrial Districts*	
		R-1	**Rural**	**VCB**	**GB**	**LI**	**GI**
Small	Roof	Y	Y	Y	Y	Y	Y
Small	Ground	Y	Y	Y	Y	Y	Y
Community	Roof	CUP	CUP	CUP	CUP	CUP	CUP
Community	Ground	CUP	CUP	CUP	CUP	CUP	CUP
Utility	Roof	N	CUP	N	CUP	CUP	CUP
Utility	Ground	N	CUP	N	CUP	CUP	CUP

Note: Y = Yes; N = No; CUP = Conditional Use Permit